

# Nutrition Guidelines for Diabetes

## I. Goals of Nutrition Management

- Maintain as near-normal blood glucose as possible by balancing food intake with insulin or oral blood glucose-lowering medications and physical activity.
- Provide adequate calories for normal growth and development rates in children and adolescents.
- Prevent and treat complications of diabetes including hypoglycemia and abnormal serum lipid levels.
- Improve overall health through good nutrition.

## II. Individualized Meal Planning

All people with diabetes should meet with a registered dietitian or nutrition counselor specialized in diabetes to individualize their meal plan based on their nutritional needs and usual eating habits.

- A. The calorie level of the meal plan is based on individual needs for growth and development as well as their physical activity level.

Children and adolescents, even if overweight, should not have calories restricted that could limit their normal growth and development.

- B. Spacing of food intake, particularly carbohydrate foods, throughout the day is key to blood sugar control. The *amount* and *timing* of carbohydrate

foods should be balanced with physical activity and insulin or oral medication.

- C. The type of carbohydrate is no longer restricted in the diabetic diet. For years, sugar (sucrose) was omitted and starches were preferred to natural sugars (lactose and fructose) found in milk and fruit. Scientific evidence has shown that all carbohydrates are digested and absorbed at similar rates. All carbohydrates are now counted as equal in terms of blood sugar regulation.

Carbohydrate foods are now interchanged using the amount of 15 grams for one serving of carbohydrate in a meal plan. Preference is given to whole grains, fruits, vegetables, and “low fat” milk because of their nutritional value, not because of the type of carbohydrate they contain.

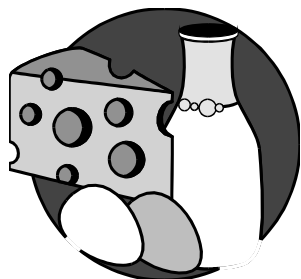
## III. Nutrition Recommendations

The Dietary Guidelines for Americans provides nutrition recommendations for health and disease prevention. Nutrition recommendations for children and adolescents include:

- Aim for a healthy weight by choosing sensible portions and being physically active every day.
- Eat at least 5 servings of vegetables and fruits every day.



- Choose a variety of grain foods, especially whole grains.
- Choose plenty of calcium rich foods including milk and milk products each day.



- Choose a diet that is moderate in total fat and limited in saturated fat and cholesterol.
- Limit beverages high in sugar.
- Moderate the use of salt.
- Avoid alcoholic beverages. Alcohol may cause hypoglycemia; risk is increased if taking insulin or sulfonylureas.

#### IV. Meal Planning Approaches

A meal pattern provides the *framework* for making food choices. Key to all meal plans is controlling the amount and the spacing of carbohydrate foods eaten throughout the day. Carbohydrate foods include milk, starches, fruits, and other high carbohydrate foods (i.e. sweets).

- **Exchange Lists for Meal Planning** is a frequently used approach. Meal plans specify the number of servings from each food group that should be eaten at each meal and snack. Food groups list measured amounts of foods that may be exchanged for one another and provide similar calorie, carbohydrate, protein, and fat content.

Nutrition guides and exchange information for fast food restaurants and national chains are available at:

[http://www.diabetes.about.com/cs/nutritiondiet/a/fast\\_food\\_guide.htm/](http://www.diabetes.about.com/cs/nutritiondiet/a/fast_food_guide.htm/)

- **Carbohydrate counting** This approach counts only grams of carbohydrate in foods. It is used when greater simplicity and flexibility are desired. Insulin amounts may be adjusted before each meal based on the grams of carbohydrate at that particular meal.

The Joslin Diabetes Center at Harvard University has created web-based materials on carbohydrate counting.

“*Carbohydrate Counting: As easy as 1-2-3*” can be accessed at:

<http://www.joslin.harvard.edu/education/library/wcarbsug.shtml/>

- **Diabetes Food Pyramid** differs from the USDA’s Food Guide Pyramid by grouping starchy vegetables and dried beans with the grain foods because of their similar carbohydrate content. See page 63 for a copy of the Diabetes Food Pyramid.